WRIGHT *v.* YUENGLING.

APPEAL FROM THE CIRCUIT COURT OF THE UNITED STATES FOR THE SOUTHERN DISTRICT OF NEW YORK.

No. 1. Argued October 9, 1894. — Decided October 22, 1894.

Whether there was any novelty in the first claim in letters patent No. 144,818, issued November 18, 1873, to William Wright for an improvement in frames for horizontal engines, *quære.*

Inasmuch as the semi-circular connecting piece in that patented machine is described by the inventor as an essential feature of his invention and is made an element of claims 1 and 2, it must be regarded as such essential feature, and a device which dispenses with it does not infringe the patent.

When an invention is not a pioneer invention, the inventor is held to a rigid construction of his claims.

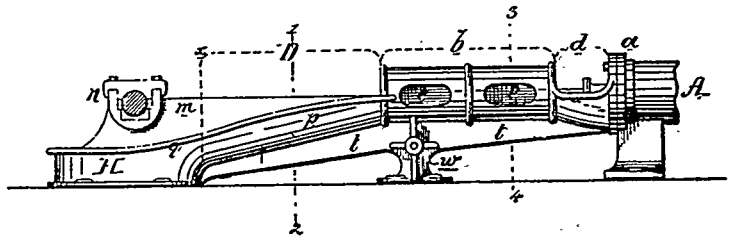
The second claim in the said patent is void for want of patentable novelty.

The combination of the cylindrical guide with the trough in that machine is not a patentable invention.

THIS was a bill in equity for an injunction and the recovery of damages for infringement of letters patent No. 144,818, issued November 18, 1873, to the plaintiff Wright, for an improvement in frames for horizontal engines.

In his specification the patentee stated the object of his invention to be the "attainment of both lightness and strength in the construction of frames for horizontal engines, and at the same time to dispense with much of the fitting and other costly work demanded by the ordinary frames of engines of this class."

The following drawing exhibits the material parts of the invention:



Statement of the Case.

The patentee further stated that "the extreme rear end of the frame, and forming part of the same, is the head *a* of the steam-cylinder A, and the portion of the frame which, in ordinary engines, is devoted to the usual flat slides, consists of a hollow cylinder, *b*, arranged concentrically with the steam-cylinder, and serving as a guide for the cross-head, the guiding cylinder being simply bored out to receive a cross-head, adapted to it in a manner which need not here be explained, as it forms no part of my present invention. There are lateral openings *ee* in this cylindrical guiding portion of the frame, in order that access may be had to the cross-head. . . . A semi-circular connecting-piece, *d*, merges at one end in the guiding cylinder *b*, and at the other end in the cylinder-head *a*, thus uniting the two, the open top of the said connecting-piece permitting ready access to be had to the stuffing-box of the cylinder-head.

"This combination, in a horizontal engine-frame, of the guiding-cylinder *b*, cylinder-head *a*, and connection *d*, constitutes an especial feature of my invention. The cylinder *b* not only forms the main body of this portion of the frame, but serves at the same time as a cross-head guide, which can be readily prepared for service by the same bar which is used for boring out the cylinder.

"From the front of the guiding-cylinder *b* to the point *x*, where it meets the base H, the frame is made in the form of an inclined concavo-convex trough, D, deep enough to permit the free movement of the connecting-rod, and this trough, . . . on the line 1 2, has one side, *m*, the upper edge of which is continued in a plane coinciding with the centre of the cylinder *b*, from the latter to the enlargement *n*, for receiving the bearing of the crank-shaft, the opposite side *p* of the trough extending from the guiding-cylinder *b*, with a gradually descending curve to the base H, into the upper portion of which it merges.

"A strengthening-rib, *q*, extends along the upper edge of the side *p* of the trough-like connection D, and is continued along the upper edge of the base H, and also along the upper edge of the side *m* of the trough, and terminates at an exten-

sion of the cylinder-head *a*; and in order to add vertical strength to the frame a central web, *t*, extends from the base H to the cylinder-head *a*, this web merging into the foot *w*, which serves as one of the supports of the frame.

"In horizontal engines there is necessarily an excessive lateral strain on the frame between the cross-head guides and the crank-shaft. This strain is effectually resisted by the comparatively light trough-like portion of the frame between the crank-shaft and guiding-cylinder."

His claims were as follows:

"1. A horizontal steam-engine frame in which a cylinder, *b*, for guiding the cross-head, is combined with the cylinder-head *a* and semi-circular connecting-piece *d*, substantially in the manner described.

"2. The combination, in a horizontal engine-frame, of the guiding-cylinder *b*, base H, and trough-like connection D.

"3. A horizontal engine-frame composed of the cylinder-head *a*, guiding-cylinder *b*, connecting-piece *d*, trough D, base H, and web *t*, all combined substantially in the manner described."

The answer set up the defences of non-infringement and want of patentable novelty by reason of certain prior patents.

Upon a hearing in the Circuit Court upon pleadings and proofs the bill was dismissed upon these grounds and plaintiff appealed.

Mr. Andrew M. Todd for appellant.

Mr. B. F. Lee for appellee.

Mr. Justice Brown, after stating the case, delivered the opinion of the court.

The object of the invention in question was to add both lightness and strength to the construction of frames for horizontal single crank engines. To attain this the patentee, instead of employing the ordinary flat parallel slides for the piston and cross-head, makes use of a hollow cylinder, arranged

concentrically with the steam cylinder, and serving as a guide for the cross-head, together with a trough connecting this cylinder with the base H, and deep enough to permit the free movement of the connecting rod. This construction is further strengthened by a rib extending along the upper edge of one side, *p*, of the trough D, continued along the upper edge of the base H, and also along the upper edge of the other side, *m*, of the trough, and terminating at an extension of the cylinder head *a*; and also, to add vertical strength to the frame, a rib or web, *t*, was extended from the base H to the cylinder head *a*, merging in a foot, *w*, which serves as one of the supports of the frame. The cylinder head *a*, the guiding cylinder *b*, with its connecting piece, the trough D, the base H, and the web *t*, are cast in a single piece and firmly bolted to the head of the steam cylinder A.

(1) The first claim is for a combination of the cylinder *b*, the cylinder head *a*, and the semi-circular connecting piece *d*, while the third claim includes the same elements and, in addition thereto, the trough D, the base H, and the web *t*.

In view of the fact to which we shall hereafter call attention, that a cylinder had been used long before for guiding the cross-head of a piston, it is at least open to doubt whether there was any novelty in the first claim. Such novelty, if there be any at all, consists in leaving certain lateral openings, *ee*, in the guiding cylinder, and in taking half the top off of such cylinder as it approaches the steam cylinder, in order to give convenient access to the cross-head. But, in the view we take of the alleged infringing device, it is unnecessary to express a decided opinion upon this point.

The connecting piece *d*, which is described in the specification as a semi-circular connecting piece merging at one end in the guiding cylinder and at the other end in the cylinder head, thus uniting the two, is not only made an element of both these claims, but is said to constitute, in connection with the guiding cylinder and cylinder head, a special feature of the invention. This so-called connecting piece is distinguished from the guiding cylinder in that it is only semi-circular, and thus admitting of access to the stuffing-box with

perfect freedom throughout a complete half circle. This access is had, not through a mere hole or opening, such as are *ee*, but through such an opening as can be obtained by cutting away the upper half of the frame at this point.

The device used by the defendant contains a similar cylinder for guiding the cross-head, and a trough connecting it with the base; but this cylinder, instead of having its entire interior surface bored out, so that it may guide the cross-head in the same way that the piston is guided in the steam cylinder, (as in the Wright patent,) merely contains an upper and a lower guide, formed of two slides or fitting strips, the surfaces of which are bored out, but no other portion of the cylinder. We do not regard this, however, as a material departure from the Wright patent, as it constitutes a mere difference in detail of construction, not affecting in any way the operation of the cross-head of the cylinder, or changing materially the efficiency of such cylinder. Nor do we think it material that in defendant's structure there is no cylinder head forming part of, cast with, and constituting a portion of the engine-frame, since the frame of the defendant's device terminates in a flange adapted to be bolted to a cylinder head, and thus in fact constituting a part of it.

But the absence of the semi-circular connecting piece *d* is a circumstance worthy of more serious consideration. In the defendant's engine there is no such semi-circular connecting piece as is described in the Wright patent, but the guiding cylinder extends backward to a connection with the head of the steam cylinder, the side of such guiding cylinder, through which the cross-head operates, containing an opening oval in shape and narrower at each end than in the centre. The equivalent for the connecting piece, if found at all, must be in this continuation of the guiding cylinder backward to the steam cylinder. But this portion of the cylinder is neither scooped out in a semi-circular form, nor does it admit of ready access to the cross-head shown at this point in the Wright patent. Instead of access to the cross-head being easier at this point than any other, it is in reality more difficult, as the oval opening is narrower there than in the centre.

Now, while this semi-circular connecting piece may be an immaterial feature of the Wright invention, and the purpose for which it is employed accomplished, though less perfectly, by the extension of the guiding cylinder in the manner indicated in defendant's device, yet the patentee, having described it in the specification and declared it to be an essential feature of his invention, and having made it an element of these two claims, is not now at liberty to say that it is immaterial, or that a device which dispenses with it is an infringement, though it accomplish the same purpose in, perhaps, an equally effective manner. *Vance* v. *Campbell*, 1 Black, 427; *Water-Meter Co.* v. *Desper*, 101 U. S. 332; *Gage* v. *Herring*, 107 U. S. 640, 648; *Gould* v. *Rees*, 15 Wall. 187; *Brown* v. *Davis*, 116 U. S. 237, 249.

If the guiding cylinder of this patent had been a pioneer invention, it is possible the patentee might have been entitled to a construction of this claim broad enough to include the defendant's device, notwithstanding the absence of the semi-circular connecting piece; but as we have already said, the novelty of the invention is at least open to doubt, and we think the patentee should be held to a rigid construction of these claims. The opening in the guiding cylinder, which is supposed to be the equivalent of the connecting piece *d*, instead of increasing so as to form a semi-circular opening, as in the patent, decreases, so as to prevent, if anything, ready access to the stuffing-box, and, under the circumstances, does not constitute a mechanical equivalent for it. Indeed, the guiding cylinder of the defendant's engine bears a stronger resemblance to those shown in the prior patents hereinafter cited than to that of the Wright patent, and hence if the prior patents anticipate the Wright cylinder, the defendant's does not infringe it.

(2) The second claim of the patent is for "the combination, in a horizontal engine-frame of the guiding cylinder *b*, base H, and trough-like connection D." The guiding cylinder, which is used in lieu of the ordinary parallel slides, was, however, by no means a novelty in the construction of engine-frames. It is found in different stages of perfection in several prior

patents, viz.: in a patent issued to Samuel Wright as early as 1837, for locomotive engines, and was there used, as the patentee states, "to subserve the twofold purpose of a (steam) pump and guide;" in the patent to Gelston Sanford of February 15, 1859, in which the invention related to elongating the cylinder, "by which means it becomes a part of the frame, used for the support of the crank shaft, and so constructed that when bored out forms a guide and rest for the cross-head;" in the patent to William Wright of August 8, 1865, in which the movement of the piston is transmitted to the main crank by means of a connecting rod, jointed to the cross-head, to which the piston is attached, and which is guided in ways or guides, fast to the frame; and in which a semi-circular connecting piece is also shown; in that to John B. Root of August 14, 1866, in which the piston also works in two cylindrical guides attached to the cylinder heads; in that to Maxwell & Cope of February 13, 1872; in that to Edward H. Cutler of November 26, 1872; and in that to George H. Babcock of December 10, 1872.

It is true that none of these patents exhibit distinctly the trough-like connection D of the Wright patent, but that also is found in the patent to Chilion M. Farrar of March 19, 1872, in which it is fully shown in the drawings, though not described in the specification, and is used in connection with the ordinary flat guides or parallel slides.

Wright's only invention, then, was in the combination of the cylindrical guide with the trough shown in the Farrar patent. Did this accomplish a new and valuable result it is quite possible that a patent therefor might have been sustained, but we do not find this to be the case. The cylindrical guide performs the same functions as in the prior patents; the trough, in which the connecting rod works in the Farrar patent, is practically the same as in the Wright patent, and the combination is a mere aggregation of their respective functions. If the combination of the trough and cylindrical guide of the Wright patent gives greater lightness and strength to the frame than the combination of the trough and the flat guides of the Farrar patent, it is a mere difference in degree,

a carrying forward of an old idea, a result, perhaps, somewhat more perfect than had theretofore been attained, but not rising to the dignity of invention. We have repeatedly held patents of this description to be invalid. *Stimpson* v. *Woodman*, 10 Wall. 117; *Smith* v. *Nichols*, 21 Wall. 112; *Guidet* v. *Brooklyn*, 105 U. S. 550; *Hall* v. *Macneale*, 107 U. S. 90.

The decree of the court below dismissing the bill is, therefore,

Affirmed.

WRIGHT *v.* BEGGS. Appeal from the Circuit Court of the United States for the Southern District of New York. No. 2, argued with No. 1. Decided October 22, 1894. MR. JUSTICE BROWN delivered the opinion of the court. This was a suit against the defendant Beggs as maker of the engine used by Yuengling, and is disposed of by the opinion in the last case holding the Wright patent to be invalid. The decree of the court below dismissing the bill is, therefore,

Affirmed.

Mr. Andrew M. Todd for appellant.

Mr. B. F. Lee for appellee.

LEWIS *v.* PIMA COUNTY.

APPEAL FROM THE SUPREME COURT OF THE TERRITORY OF ARIZONA.

No. 550. Submitted October 17, 1894. — Decided October 29, 1894.

The act of the legislature of Arizona of February 21, 1883, authorizing Pima County in that Territory to issue its bonds in aid of the construction of a railway, is a violation of the restrictions imposed upon territorial legislatures by Rev. Stat. § 1889, as amended by the act of June 8, 1878, c. 168, and the bonds issued under the authority assumed to be conferred by that statute created no obligation against the county which a court of law can enforce.

THIS was an action originally begun in the District Court of the First Judicial District of Arizona upon 2250 coupons